

Midpoint of a Line Segment

Date: _____

If A has the coordinates (x_1, y_1) and B has coordinates (x_2, y_2) , then the coordinates of the midpoint, M, of the segment AB are $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$.

EX: Determine the coordinates of the midpoint, M, of the line segment with endpoints A(-2, -3) and B(4, 7).

EX: For a line segment DE, an endpoint is D(6, 5) and the midpoint is M(4, 2). Find the coordinates of endpoint E.

Median of a triangle - a line that joins a vertex of a triangle to the midpoint of the opposite side.

EX: Determine an equation for the median from vertex C for the triangle with vertices A(-2, 4), B(-8, -4) and C(5, -7).

Right Bisector of a Line - a line that passes through the midpoint of another line and intersects it at a 90° angle.

EX: Line segment AB has endpoints A(-3, 4), and B(5, 0). Determine an equation for the right bisector of AB.